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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, KIM T

ART UNIT PAPER NUMBER

3713

DATE MAILED: 12/22/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,786

Applicant(s)

JOHN ET AL.

Examiner

Kim Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

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DETAILED ACTION

Claim Objections

1. Claims 2, 14, and 20 are objected to because of the following informalities:
 - a) In claim 1, line 1, the claimed limitation “location” should be corrected to “locations”.
 - b) In claim 2, line 4, the claimed limitation “the area” should be corrected to “an area”.
 - c) In claim 2, line 6, the claimed limitation “the local oscillators” should be corrected to “local oscillators”.
 - d) In claim 14, line 1, the claimed limitation “for three dimensional location” should be corrected to “for determining three dimensional locations”.
 - e) In claim 14, line 3, the claimed limitation “a sensor” should be corrected to “said sensor”.
 - f) In claim 14, line 4; and claim 20, line 5; the claimed limitation “antenna” should be corrected to “antennas”.
 - g) In claims 14, lines 4-5; and claim 20, lines 5-6; the claimed limitation “a bounded area” should be corrected to “the bounded area”.
 - h) In claim 14, line 8, the claimed limitation “location” should be corrected to “locations”.
 - I) In claim 20, line 3, the claimed limitation “a device” should be corrected to “the device”.

Appropriate correction is required.

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Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-13, 17, 19, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) In claim 1, line 1, the claimed limitation "A method and system" is ambiguous. It is not clear if the claim should be interpreted as the claim method or the claim system. Further, the claim does not show the steps of a method, or specific arrangements of devices in a system.

b) In claim 2, line 1, the claimed limitation "The implementation" is ambiguous. Does "the implementation" imply the arrangement of devices in a system?

c) In claims 3-13, line 1, the claimed limitation "The application" is ambiguous. Does the claimed limitation imply a method or a system of claim 1?

d) Claims 19 and 21 are similarly rejected as explained in claims 3-13 above.

e) In claim 3, the phrase "or any other radiolocation scheme" renders the claim indefinite because the claim includes elements not actually disclosed (those encompassed by "or any other radiolocation scheme"), thereby rendering the scope of the claim unascertainable. See MPEP § 2173.05(d).

f) In claim 4, line 5; and claim 11, line 2; the expression "and/or" is ambiguous. It is not clear if the expression should be read as "and" or "or".

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g) Claim 17 recites the limitation "the device" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 3-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over King, Jr. (US 2003/0054905) in view of Richards et al (US. Patent No. 6,111,536).

a. As per claim 1, King discloses a system to determine locations of objects using closely spaced antennas 70 (Fig. 1) (paragraphs 0003 and 0004). King does not explicitly disclose determining the coarse and fine locations of objects. However, Richards discloses a method for performing course and fine distance measurement (col. 5, lines 29-67; and col. 6, lines 1-65). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the method for measuring coarse and fine distance of Richards to the method for determining the locations of objects of King in order to provide appropriate estimation of locations of objects according to the required accurateness and system resources.

b. As per claim 3-4, King discloses providing a real time display of ball location (paragraph 0034).

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c. As per claim 5-13, King discloses using radiolocation system for football game, hockey game, for reviewer enhancement or monitoring of subjects (paragraphs 0044, 0007, and 0008). Further, using the radiolocation system monitoring airplane, surveying a facility, etc. would have been well known automatic surveying activities.

5. Claims 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over King, Jr. (US 2003/0054905).

a. As per claim 14-15, King discloses a system for determining locations of objects. The system comprises a sensor coupled to the object (paragraphs 0004 and 0034), two antennas 70 (Fig. 1), a receiver and a computer for determining locations of the sensors (paragraphs 0038, 0034, and 0016). King does not explicitly disclose determining locations in three dimensions. However, determining a location of an object in 3D would have been well known to a person of ordinary skill in the art at the time the invention was made. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to determine the location of an object of King in 3D in order to provide a user a location of an object in a real space.

b. As per claim 16-18, a passive sensor or a magnet sensor or R-L sensor would have been well known sensors.

c. As per claim 19, refer to discussion in claim 4 above.

d. As per claim 20-21, refer to discussion in claims 4 and 14 above.

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6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over King, Jr. (US 2003/0054905) in view of Richards et al (US. Patent No. 6,111,536) and Zelmanovich et al (US. Patent No. 6,347,229).

As per claim 2, Zelmanovich discloses using four antennas arranged in closely spaced pairs (col. 4, lines 64-67); receivers with local oscillators, phase locked loops, phase detectors (col. 6, lines 11-15 and 38-61). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the signal detecting and signal processing devices of Zelmanovich to the system of King in order to facilitate detecting and processing signals indicating the locations of objects.

Cited Reference

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Amorai-Moriya et al (US. 6,316,934) discloses a system for monitoring 3D position of an object.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Nguyen whose telephone number is (703) 308-7915. The examiner can normally be reached on Monday-Thursday from 8:00AM to 5:00PM ET.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa Walberg, can be reached on (703) 308-1327. The central official fax number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148.

kn

Date: December 12, 2003



KIM NGUYEN
PRIMARY EXAMINER